

Name _____

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MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine whether the ordered pair satisfies the equation.

- 1) $5x + 2y = 26$; (4, 3) 1) _____
 A) Yes B) No

Answer: A

Objective: (7.4) Determine Whether an Ordered Pair Satisfies an Equation in Two Variables

final009 interactmath 7.3 #33

Solve the equation. Check your solution.

- 2) $3x - 8 = 4(x + 1)$ 2) _____
 A) {12} B) {-4} C) {-12} D) {4}

Answer: C

Objective: (8.3) Solve a Linear Equation with the Variable on Both Sides of the Equation

final017 interactmath 8.2 #53

- 3) $\frac{5x}{2} + 3 = \frac{1}{7}$ 3) _____

- A) $\left\{\frac{2}{5}\right\}$ B) $\left\{-\frac{8}{7}\right\}$ C) $\left\{-\frac{41}{35}\right\}$ D) $\left\{\frac{33}{35}\right\}$

Answer: B

Objective: (8.4) Use the Least Common Denominator to Solve a Linear Equation Containing Fractions

final018 interactmath 8.3 #29

- 4) $x + 7.1x = 234.9$ 4) _____
 A) {2.9} B) {30} C) {36.1} D) {29}

Answer: D

Objective: (8.4) Solve a Linear Equation Containing Decimals

final022 interactmath 8.3 #51

Solve the equation. State whether the equation is a contradiction, an identity, or a conditional equation.

- 5) $2(x + 3) = (2x + 6)$ 5) _____
 A) \emptyset or { }; contradiction B) {0}; conditional equation
 C) all real numbers; identity D) {12}; conditional equation

Answer: C

Objective: (8.4) Classify a Linear Equation as an Identity, Conditional, or a Contradiction

final025 interactmath 8.3 #65

Solve for y.

- 6) $14x + 9y = 10$ 6) _____
 A) $y = \frac{10 - 14x}{9}$ B) $y = \frac{14}{9}x - \frac{10}{9}$ C) $y = \frac{14x - 10}{9}$ D) $y = \frac{14x + 10}{9}$

Answer: A

Objective: (8.5) Solve a Formula for a Variable

final041 interactmath 8.4 #61

Solve the problem.

7) The sum of a number and three is negative eleven. Find the number.

A) 14

B) -14

C) -8

D) 0

7) _____

Answer: B

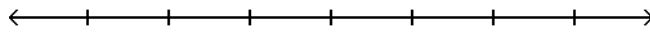
Objective: (8.6) Build Models for Solving Direct Translation Problems

final042 interactmath 8.5 #61

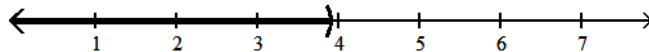
Solve the inequality and express the solution set in interval notation. Graph the solution set on the real number line.

8) $1.4x - 3.8 > 0.7x - 1.07$

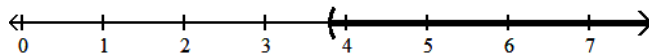
8) _____



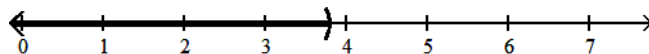
A) $(-\infty, 3.9)$



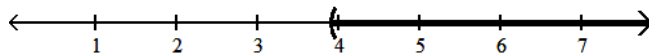
B) $(3.8, \infty)$



C) $(-\infty, 3.8)$



D) $(3.9, \infty)$



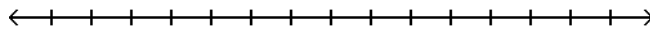
Answer: D

Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality

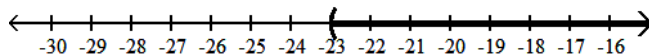
final067 interactmath 8.8 #115

9) $6x - 2 < 7(x - 3)$

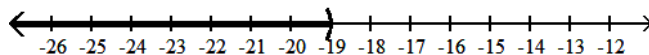
9) _____



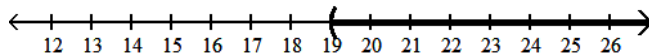
A) $(-23, \infty)$



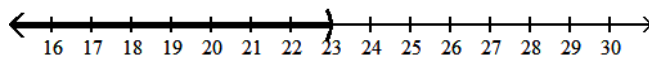
B) $(-\infty, -19)$



C) $(19, \infty)$



D) $(-\infty, 23)$



Answer: C

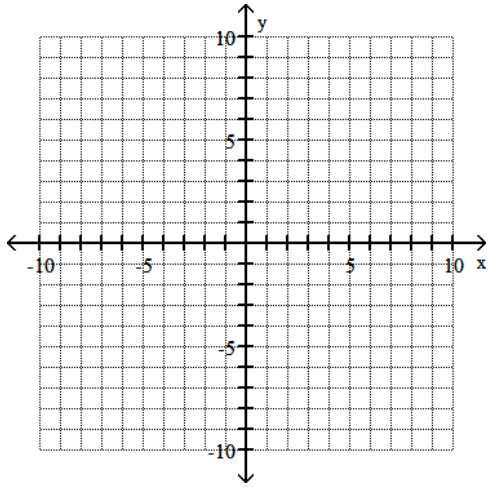
Objective: (8.9) Solve Linear Inequalities Using Properties of Inequality

final068 interactmath 8.8 #75 quick check 8.8.17

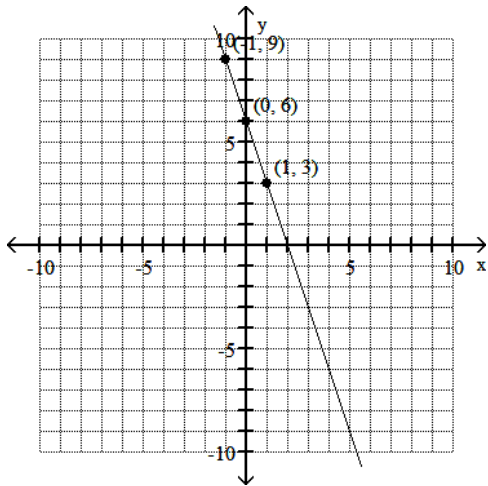
Graph the linear equation using the point-plotting method.

10) $y = -3x - 6$

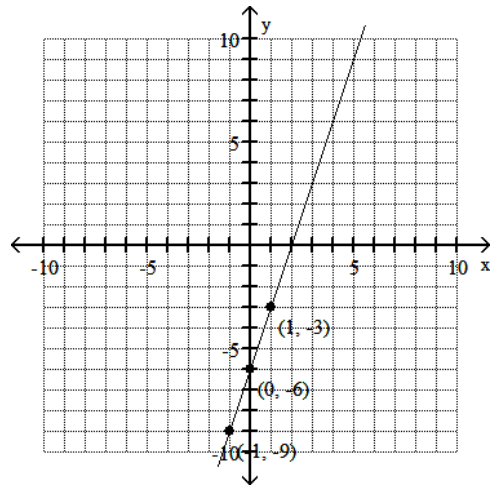
10) _____



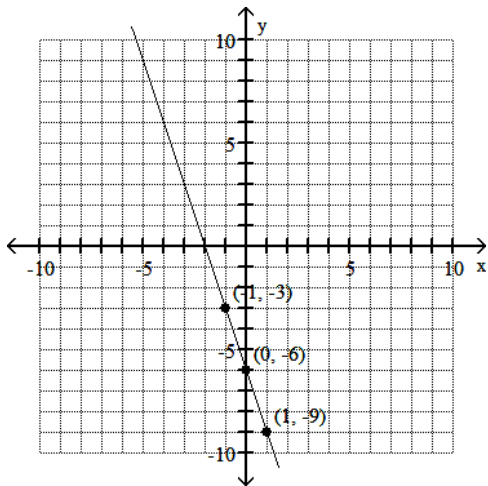
A)



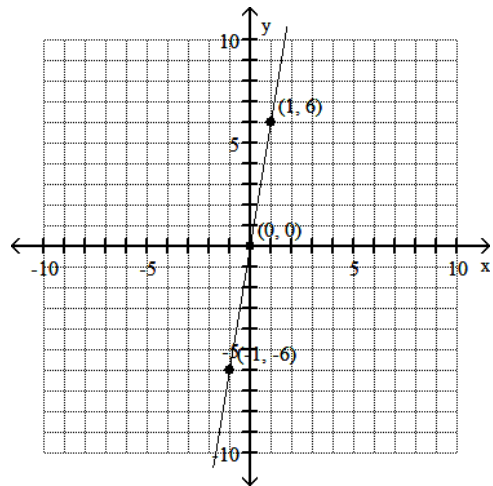
B)



C)



D)



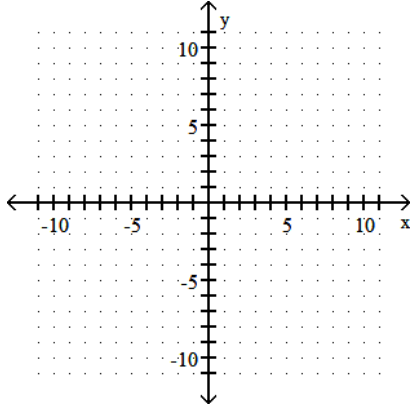
Answer: C

Objective: (9.3) Graph a Line by Plotting Points
 final076 interactmath 9.2 #37

Graph the linear equation by finding and plotting its intercepts.

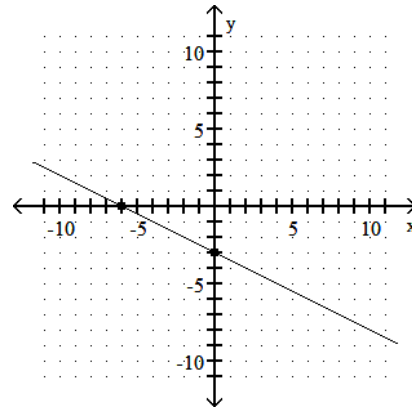
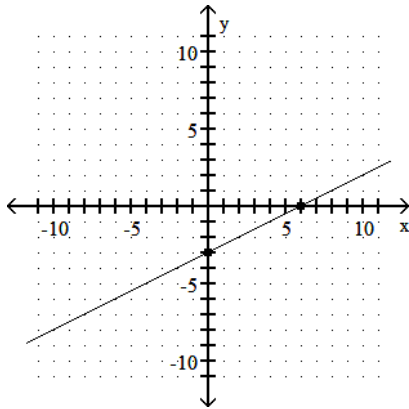
11) $-5x - 10y = 30$

11) _____



A) $(0, -3), (6, 0)$

B) $(0, -3), (-6, 0)$



Answer: B

Objective: (9.3) Graph a Line Using Intercepts
final079 interactmath 9.2 #43

Find the slope of the line containing the two points.

12) $(1, -5); (-9, 6)$

12) _____

A) $-\frac{11}{10}$

B) $-\frac{10}{11}$

C) $\frac{11}{10}$

D) $\frac{10}{11}$

Answer: A

Objective: (9.4) Find the Slope of a Line Given Two Points
final083 interactmath 9.3 #23

Find the slope and the y-intercept.

13) $3x + y = 4$

13) _____

A) $m = -\frac{1}{3}; b = \frac{4}{3}$

B) $m = -3; b = 4$

C) $m = \frac{3}{4}; b = \frac{1}{4}$

D) $m = 3; b = 4$

Answer: B

Objective: (9.5) Use the Slope-Intercept Form to Identify the Slope and y-Intercept of a Line
final089 interactmath 9.4 #29

Find the equation of the line described. Write the equation in slope-intercept form, if possible.

14) $(4, 3); \text{slope} = -3$

14) _____

A) $y = -3x + 15$

B) $x = -3y + 15$

C) $y = -3x - 15$

D) $x = -3y - 15$

Answer: A

Objective: (9.6) Find the Equation of a Line Given a Point and a Slope
final096 interactmath 9.5 #13

Determine if the lines parallel, perpendicular, or neither.

15) $L_1: y = 7x + 5$

$L_2: y = -\frac{1}{7}x + 3$

A) perpendicular

B) parallel

C) neither

Answer: A

Objective: (9.7) Determine Whether Two Lines Are Perpendicular

final100 interactmath 9.6 #33

15) _____

Solve the system of equations using substitution.

16) $\begin{cases} x + y = -6 \\ y = 2x \end{cases}$

A) (-2, 4)

B) (-2, -4)

C) (2, 4)

D) (2, -4)

Answer: B

Objective: (10.3) Solve a System of Linear Equations Using the Substitution Method

final102 interactmath 10.2 #13,35

16) _____

Solve the system of equations using elimination.

17) $\begin{cases} x - 4y = 17 \\ -3x - 5y = 51 \end{cases}$

A) (-8, -5)

B) (-7, -6)

C) (7, -5)

D) no solution

Answer: B

Objective: (10.4) Solve a System of Linear Equations Using the Elimination Method

final106 interactmath 10.3 #17

17) _____

Subtract the polynomials. Express your answer in standard form.

18) $(7x^2 + 20x + 5) - (5x^2 - 4x - 12)$

A) $2x^2 + 24x - 7$

B) $2x^2 + 25x - 7$

C) $43x^9$

D) $2x^2 + 24x + 17$

Answer: D

Objective: (11.2) Simplify Polynomials by Combining Like Terms

final109 interactmath 11.1 #73,75

18) _____

Simplify the expression.

19) $(-8x^9y^8z)^2$

A) $-8x^{11}y^{10}z$

B) $-64x^{18}y^{16}z^2$

C) $16x^{18}y^{16}z^2$

D) $64x^{18}y^{16}z^2$

Answer: D

Objective: (11.3) Simplify Exponential Expressions Containing Products

final111 interactmath 11.2 #49,53

19) _____

Multiply the monomials.

20) $(7x^6y)(8x^2y^4)$

A) $56x^8y^5$

B) $56x^8y^4$

C) $56x^{12}y^4$

D) $15x^8y^4$

Answer: A

Objective: (11.3) Multiply a Monomial by a Monomial

final113 interactmath 11.2 #63

20) _____

Find the product of the sum and difference of two terms.

21) $(7p + 9)(7p - 9)$

A) $49p^2 - 81$

B) $p^2 - 81$

C) $49p^2 + 126p - 81$

D) $49p^2 - 126p - 81$

Answer: A

Objective: (11.4) Multiply the Sum and Difference of Two Terms

final125 interactmath 11.3 #65

21) _____

Find the product.

22) $(6x - 11y)^2$ 22) _____
A) $36x^2 + 121y^2$ B) $6x^2 + 121y^2$
C) $36x^2 - 132xy + 121y^2$ D) $6x^2 - 132xy + 121y^2$

Answer: C

Objective: (11.4) Square a Binomial
final130 interactmath 11.7 #79

23) $(2y + 11)(5y^2 - 2y - 9)$ 23) _____
A) $10y^3 + 51y^2 - 40y - 99$ B) $10y^3 + 59y^2 + 40y + 99$
C) $65y^2 - 26y - 117$ D) $10y^3 - 4y^2 - 18y + 11$

Answer: A

Objective: (11.4) Multiply a Polynomial by a Polynomial
final134 interactmath 11.3 #87

Use the Quotient Rule to simplify. All variables are nonzero.

24) $\frac{56m^{20}n^{14}}{7m^{19}n^{10}}$ 24) _____
A) $8n^4$ B) $8mn^4$ C) $56mn^4$ D) $8m^{39}n^{24}$

Answer: B

Objective: (11.5) Simplify Exponential Expressions Using the Quotient Rule
final135 interactmath 11.4 #41

Use the Quotient to a Power Rule to simplify. All variables are nonzero.

25) $\left(\frac{6t^3}{3s^4}\right)^2$ 25) _____
A) $\frac{4t^6}{s^4}$ B) $\frac{4t^6}{s^8}$ C) $\frac{4t^5}{s^6}$ D) $\frac{2t^6}{s^8}$

Answer: B

Objective: (11.5) Simplify Exponential Expressions Using the Quotient to a Power Rule
final138 interactmath 11.4 #49

Use the Negative Exponent Rules to simplify. Write the answer with positive exponents. All variables are nonzero.

26) 3^{-4} 26) _____
A) -81 B) $\frac{1}{81}$ C) $\frac{1}{12}$ D) 81

Answer: B

Objective: (11.5) Simplify Exponential Expressions Using Negative Exponents
final142 interactmath 11.4 #63

Find the quotient using long division.

27) $\frac{3m^2 + 17m - 56}{m + 8}$ 27) _____
A) $3m - 7 + \frac{6}{m - 7}$ B) $m - 7$ C) $3m - 7$ D) $3m + 7$

Answer: C

Objective: (11.6) Divide a Polynomial by a Binomial
final146 interactmath 11.5 #33

Factor the trinomial completely. If the trinomial cannot be factored, say it is prime.

28) $x^2 + x - 20$

A) $(x - 5)(x + 4)$

B) $(x + 1)(x - 20)$

C) prime

D) $(x - 4)(x + 5)$

28) _____

Answer: D

Objective: (12.3) Factor Trinomials of the Form $x^2 + bx + c$

final151 interactmath 12.2 #63

Factor completely. If the polynomial is prime, state so.

29) $81x^2 - 16y^2$

A) $(9x + 4y)(9x - 4y)$

B) prime

C) $(9x + 4y)^2$

D) $(9x - 4y)^2$

29) _____

Answer: A

Objective: (12.5) Factor Difference of Two Squares

final159 interactmath 12.4 #39,41

Find the function value.

30) Find $f(3)$ when $f(x) = x^2 + 3x - 4$.

A) -4

B) 4

C) 22

D) 14

30) _____

Answer: D

Objective: (14.4) Find the Value of a Function

final172 interactmath 14.3 #59